

# **EXHIBIT 132**

## **REDACTED**

## Message

From: [REDACTED]  
Sent: 7/7/2014 7:57:21 PM  
To: [REDACTED]  
CC: [REDACTED]

Subject: [REDACTED]

This thread is getting long. I will start a new thread and set up a meeting to get the short-term auction change experiments going.

- [REDACTED]

On Mon, Jul 7, 2014 at 1:40 PM, [REDACTED] wrote:  
Aparna,

Adding on to what [REDACTED] said. There are two further cases to your thought regarding "user" boost. Let's call all the information we have regarding the user before we see the bids (for a single query) as **observable** information. And let's call the information that is inherently present in the bids as **non-observable** or **elicited** information. Note that observable information is not always sufficient to infer whether a user is high valued or not (for a given advertiser).

Now to convert advertiser value into publisher revenue, we need different mechanisms for these two different forms of information

- a) *If the **observable** information tells us that a given user is high valued:* Typically a reserve price or boost is sufficient.
- b) *If only the **elicited** information can tell us that a given user is high valued:* One needs to change the auction in more subtle ways.

[REDACTED]

ps: This is my way to break down the thought process when thinking about auction design. There could be better ways. :)

On Mon, Jul 7, 2014 at 1:01 PM, [REDACTED] wrote:  
Hi,

It absolutely does make sense to distinguish these cases. These mechanisms improve over the second price with "one" reserve (both in terms of publisher's revenue and value created for the advertisers) when there are (re-marketing) advertisers with high value that is not known to the publisher.

Thanks,  
Nitish

On Wed, Jun 18, 2014 at 4:42 PM, [REDACTED] wrote:

Just to clarify that

On Wed, Jun 18, 2014 at 4:10 PM, [REDACTED] wrote:

Yes, let's chat offline. But we were talking about adx wishing more transparency into how the [REDACTED] is cooked up ([REDACTED]) for rasta metrics etc -- so your proposal is very much in line with that.

On Wed, Jun 18, 2014 at 3:59 PM, Nitish Korula <[REDACTED]> wrote:

On Wed, Jun 18, 2014 at 3:17 PM, [REDACTED] wrote:

@Nitish: No,

Let's just move to a unified mixer, already. :)

We can take this discussion to a separate thread with just the AdX and XFP opt folks instead of continuing to spam everyone. :)

[REDACTED]  
[REDACTED]  
[REDACTED]

On Wed, Jun 18, 2014 at 3:09 PM, Nitish Korula [REDACTED] wrote:  
Thanks, [REDACTED].

It sounds then like it's ok to go ahead with per-user and other forms of RPO experiments, but not (yet) per-buyer RPO or cross-publisher data sharing.  
maxl@, can you ask about using per-buyer data in your next follow up? AdX folks, there is nothing from the AdX end preventing the sharing of buyer data with XFP, right? If not, then we can hope to also do per-buyer RPO soon.

If we're ok with all legal issues and can now focus on more interesting technical questions (<grin>), has the AdX Opt team developed an RPO system we can integrate into DFP? Is there a design doc / proposed design? We should figure out how to integrate it into the EDA algorithmic logic without over- or underdelivery.  
( [REDACTED] is your paper with [REDACTED] on the "buy it now"-type reserve pricing useful here?)

On Wed, Jun 18, 2014 at 2:57 PM, [REDACTED] wrote:  
privileged and confidential

Broad comment on experimentation - may not be fully applicable to this particular experiment, and I may not have the full context:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

On Wed, Jun 18, 2014 at 11:28 AM, [REDACTED] wrote:  
+ [REDACTED] fyi

On Wed, Jun 18, 2014 at 2:26 PM, [REDACTED] wrote:

We should view this as approval to extend EDA, much in the way [REDACTED] described. Generally we can use EDA for RPO. Adding data on all bids / buyers to the pipeline would need a bit more follow up since (as Nitish said) that could be considered a new category - how about we start with cookie based?

In the longer term as DFP and AdX merge whether we do RPO from DFP or AdX is not really relevant. However, I think there is value in an experiment from DFP using existing EDA pieces now - it is something we can launch soon because of the current separation between the two systems and how we disclose how they work together to our customers. And it will give us some data on the potential value (and buy side impact).

Buyer ROI impact is an issue, but let's do an experiment and evaluate from there.

On 18 June 2014 13:04, [REDACTED] wrote:

On Wed, Jun 18, 2014 at 10:39 AM, [REDACTED] wrote:

On Wed, Jun 18, 2014 at 10:32 AM, Nitish Korula [REDACTED] wrote:

[REDACTED]

On Wed, Jun 18, 2014 at 10:14 AM, Aparna Pappu <[REDACTED]> wrote:

This seems like a very reasonable approach - the experiment.

Re [REDACTED] and Nitish's question - as [REDACTED] put it it's a question of surplus value. Right now we want to make sure we have access to all the queries on the exchange in order to give our buyers the opportunity to buy. If that means they choose not to buy at certain prices that's totally fine.

[REDACTED]

Lets launch the experiment - get some data and then come up with a model that works

On Wed, Jun 18, 2014 at 9:33 AM, [REDACTED] wrote:

Nitish@, you are right DFP do not have buyer info directly. Similarly, DFP do not have AdX bid info directly either, but that does not stop us from building EDA as we can always join DFP + AdX logs. Luckily [REDACTED] already has such a pipeline and we can enable it for EDA publishers with some modification (e.g., no data sharing between DFP pubs).

[REDACTED]

On Wed, Jun 18, 2014 at 6:55 AM, [REDACTED] wrote:

@Nitish: all good questions, and hotly debated. In particular, the buyer ROI question is of interest to our GDN friends, and the signal I'm getting is that we should do what we believe is best for the long term health of the ecosystem and for the pubs. Since I'm being paid to do pub side optimization, it is my professional opinion that a little cash transfer to pubs wouldn't hurt. Your opinion on this matter is welcome.

I have to admit not clear myself on what the eda clearance gives us in terms of per buyer RPO, but hope we'll reach common understanding soon.

-- martin on android

On Jun 18, 2014 12:27 AM, "Nitish Korula" <nitish@google.com> wrote:

Sorry, Max, I may be a bit dense. In order for DFP to (near-optimally) calculate how much the per-buyer reserves should be, we have to know what different buyers typically bid, right? Right now, I don't think we have that information \*in DFP\* directly; we may be able to get it by joining with AdX logs, etc., but that's what Max (Loubser)'s mail made me wonder about; does our current clearance cover that?

Separately, of course per-buyer RPOs are typically good for publisher revenue, but not necessarily for buyers (aka 'social welfare'). We're ok with this strategically, right? (For instance, if getting more good inventory at high CPMs is more important for us now than maximizing buyer ROI.)

Nitish

On Tue, Jun 17, 2014 at 4:44 PM, [REDACTED] wrote:

Nitish, the actual per-buyer adjustment will always happen on the AdX side after we receive buyer bids, but if we can make the decisions on a) whether to adjust per-buy b) by how much on the DFP side, we can presumably launch per-buyer RPO for all EDA publishers [REDACTED]

On Tue, Jun 17, 2014 at 4:08 PM, [REDACTED] wrote:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

DFP competitors (if any), and RPO (if any).

DFP can be viewed as a buyer in the AdX auction whose bid bypasses the other floors, b.c. the DFP is the initiator of the auction.

RPO + rules can be applied to buyers and those exceeding DFP floor price would be returned back to DFP and served.

We can leverage [REDACTED] pipeline to build per-user-per-buyer distributions to use for RPO.

On Tue, Jun 17, 2014 at 2:42 PM, Nitish Korula [REDACTED] wrote:

> That's great news! [REDACTED] effort should be definitely covered, but per-buyer  
> floors don't seem to be so easy, because we don't have buyer information,  
> right? We \_can\_ do separate RPO for individual deals / private auctions,  
> etc., right? [REDACTED] is there a way you have in mind we can do per-buyer  
> floors from DFP?

>

> Nitish

>

>

> On Tue, Jun 17, 2014 at 2:31 PM, [REDACTED] wrote:

>>

>> I had in mind extending [REDACTED] effort to include [REDACTED]  
[REDACTED]

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